EXD. R

Vol. 87. Part 3. Pp. 69-101, 24 figs. 31st MAY, 1938.

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OF THE

ROYAL ENTOMOLOGICAL SOCIETY

OF

LONDON

World List abbreviation: *Trans. R. ent. Soc. Lond.*

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LONDON:
PUBLISHED BY THE SOCIETY AND
SOLD AT ITS ROOMS, 41, QUEEN'S GATE, S.W.7

Price 7s. 6d.

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ON *ELYTRURUS* (COL. CURCUL.) AND AN ALLIED NEW GENUS

By Sir Guy A. K. Marshall.

With Twenty-four Figures.

[Read 2nd February, 1938.]

The genus *Elytrurus* belongs to a tribe of the Curculionidae, the Celeuthetini, which is confined to the Malay Archipelago, Papua and certain islands in the south-western corner of the Pacific, but *Elytrurus* itself is restricted entirely to the last-named area, in which it constitutes a very characteristic element of the weevil fauna.

Our knowledge of the insects of these islands is still very limited, but so far as it goes, it seems that the Fiji Islands may be regarded as the headquarters of the genus, the number of species at present known from the various groups being as follows: Fiji 22, New Hebrides 9, Samoa 2, Tonga 1, Santa Cruz 1, and Solomons 1. In the Solomons the genus only just enters the south-eastern corner of the group, the single species occurring only on the small island of Santa Ana, this being the extreme western limit of the genus; for the fine collections made in recent years by Messrs. H. T. Pagden and R. A. Lever in the other islands of the group have failed to reveal a single example of *Elytrurus*.

One species has been described from the atoll of Funafuti, in the Ellice Islands—namely, *E. squamatus* Rainbow (1897, *Mem. Austral. Mus.* **3**: 92). Thanks to the kindness of Mr. C. Anderson, Director of the Australian Museum, Sydney, I have been able to examine four cotypes of this species, which prove to be not an *Elytrurus* but a synonym of *Trigonops spongicollis* Fairm. This species was described from Tahiti, but occurs also in Samoa, and was probably carried from there to Funafuti.

More recently Dr. K. M. Heller (1935, *Nova Guinea*, **17**: 162, fig. 17) has doubtfully attributed a New Guinea species to *Elytrurus*, but adds that it might be necessary to transfer it to a new genus. With this latter view I agree, as a result of examining one of his cotypes which he kindly submitted to me. Moreover, Miss L. E. Cheesman has lately discovered in another part of New Guinea six other new species which are congeneric with it. A new genus is proposed below for the reception of these seven species.

The range of *Elytrurus* therefore lies roughly between 10° and 20° S. Lat. and between 163° and 171° E. Long. In view of its prevalence in the New Hebrides Group, it is somewhat remarkable that no trace of it has been found in the Loyalty Islands or in New Caledonia.

This survey of the genus suggests that probably not more than one-third of the existing species are yet known. Even in the Fiji Group, in which there are nearly 100 islands, the figures might easily be doubled; for it is notable that from the large island of Vanua Levu only two species have been recorded, apart from the common and widely spread *E. griseus* Guér.

An interesting point in connection with *Elytrurus* is its relationship with the genus *Rhyncogonus* Sharp, which much resembles it superficially and entirely replaces it in the Hawaiian Group and in all the Polynesian islands to the east

of the great Tonga Deep, one of the profoundest depressions in the whole ocean floor, with maximum soundings of approximately six miles. In not a single island does the range of the two genera overlap.

Rhyncogonus is primarily distinguished from the Celeuthetini by the simple corbels of its hind tibiae, whereas in the latter tribe the external edge of the corbels is enclosed by a broad bevel. In the fully developed form of an enclosed corbel the bevel lies nearly or quite at right angles to the long axis of the tibia and bears a dense row of stiff bristles on each side, the bevel itself being squamose or sometimes bare. But in the great majority of the Celeuthetini the corbels are of a type to which Faust applied the term " false corbel." In this type the bevel is flat, quite bare and shiny, and has entirely lost all the bristles on its inner edge. In *Elytrurus*, however, the corbel has developed in the opposite direction; that is to say, the inner edge of the bevel bears a row of strong bristles and is raised high above the outer one, so that the surface of the bevel lies almost or quite in the same plane with the long axis of the tibia instead of at right angles to it; further, in the great majority of species the *outer* row of bristles has entirely disappeared except at the extreme dorsal end; in a few species these bristles are present in some specimens and absent in others, suggesting that they have become deciduous. It thus appears as though in *Elytrurus* the corbels are in process of reverting to the more simple type found in *Rhyncogonus*.

But there is another distinction between these two genera to which David Sharp attached so much importance that he proposed the separation of the latter genus into a new tribe, Rhyncogonides (1919, *Proc. Hawai. ent. Soc.* **4** : 77). This character consists in the form of the buccal structures, the mentum in *Rhyncogonus* being usually reduced so as to expose the whole of the maxillae and being supported basally on a gular peduncle; whereas *Elytrurus* is normally entirely adelognathous and has no gular peduncle. He admitted, however, that there was some variation in the size of the mentum in *Rhyncogonus*, and in certain species, such as *R. saltus* Perk., the mentum partly conceals the maxillae. But in any case these characters do not clearly separate *Rhyncogonus* from *Elytrurus*, for there are two species in the latter genus which exhibit the reduced mentum and the gular peduncle, thus linking up the two genera; and it is interesting to note that these insects occur only at the extreme eastern limit of the range of the genus, where it most nearly approaches that of *Rhyncogonus*, namely, in Samoa.

But apart from this, Sharp's proposed tribe cannot be regarded as valid, for the buccal condition on which it is based occurs much more widely than he had supposed and among various tribes of broad-nosed weevils. It seems especially liable to arise in normally adelognathous genera that are insular in distribution, such as *Lachnopus*, which is confined to the islands of the Caribbean Sea, and *Cratopus*, which is peculiar to islands in the Indian Ocean. I have also observed many examples of it among New Zealand genera, as well as in some Australian species. In fact, the precise taxonomic significance of these characters clearly requires thorough revision.

Actually, the inclusion of *Elytrurus* in the Celeuthetini is not altogether satisfactory, because in the typical forms (comprising the vast majority of the species) not only are the corbels of the hind tibiae very different, being of the " false " type (or " semi-enclosed," as I prefer to call it) mentioned above, but also the rostrum is separated from the forehead by a more or less angular incision, whereas in *Elytrurus* and its allies there is no sign of this division. But the reclassification of the tribe is beyond the scope of the present paper.

The records of the geographical distribution of some of the species are in a rather unsatisfactory state, owing probably to the fact that some of the earlier collectors who visited various groups of islands did not indicate with sufficient care the precise origin of their captures, so that they have sometimes been wrongly labelled. For example, Boisduval described two species from Vanikoro, in the Santa Cruz Group, *E. lapeyrousei* and *E. cinctus*; recent collectors have found the former species occurring commonly on that island, but no other specimen of *E. cinctus* has turned up from there for more than a century, and all authentic modern records indicate that its true locality is in the Tonga Group. Again, Pascoe described his single male of *E. caudatus* from Fiji, where the species has never occurred since, though it has been found commonly in the New Hebrides. To prevent confusion, therefore, I have decided to ignore such old records where they are in glaring conflict with reliable recent information; for the material available indicates that, as in the genus *Rhyncogonus*, the species of *Elytrurus* have normally an extremely restricted distribution.

Elytrurus Boisd.

Elytrurus Boisduval *in* d'Urville, 1835, *Voy.* "*Astrolabe*," *Ent.* (2) : 400.
Elytrogonus Guérin, 1841, *Rev. Zool.* **4** (App.) : 126 (**syn. n.**).

With the much greater number of species now available, the distinctions relied upon by Lacordaire for separating *Elytrogonus* from *Elytrurus* no longer hold good. The principal character was the post-humeral angulation of the elytra, which clearly has only a specific value and can be observed in a reduced form in several allied species.

The genus is certainly polymorphic, but apart from the two Samoan species, which might perhaps be separated off generically, the fundamental characters appear to be very stable. The divergence in form is largely due to a high degree of sexual dimorphism, which is unusual among weevils. This dimorphism principally involves the lateral and apical processes of the elytra, which, when they differ sexually, are always more exaggerated in the male, which sex has also a marked tendency towards a flattening of the upper surface.

An exceptional type of dimorphism is to be found in the first segment of the hind tarsi : in the male this segment is clothed beneath with soft hairs; but in the female its inner edge on the basal half is set with stiff spines, which are sometimes bare and sometimes partly hidden by hairs. These spines probably play some part in oviposition, but at present we have no information whatever about this process; nor, indeed, have I seen or received any record regarding the habits or food-plants of any species.

In the Otiorrhynchinae generally the chaetotaxy of the mentum appears to afford a good generic character, but this is not the case in *Elytrurus*, in which these setae seem to be disappearing. In *E. divaricatus* Waterh., *E. risbeci* Mshl., *E. ambrymensis* sp. n., and *E. santicolus* sp. n., the mentum bears a transverse row of four discal setae; in *E. samoensis* Mshl. and *E. bicolor* Mshl. there are only two setae; and in the remaining 29 species the mentum is entirely bare.

Key to the Species of Elytrurus.

1 (6). Mentum reduced, supported on a gular peduncle and leaving the maxillae exposed; mesosternal process broadly truncate or sinuate at apex and there broader than the base of a median femur; metasternum between the coxae much shorter than a median coxa (Samoa).

2 (3). Each elytron with a broad stripe of green scaling, the inflexed margins and a broad sutural stripe bare, and an abbreviated row of erect spine-like bristles on the inflexed margins behind the middle
1. *bicolor* Mshl. ♂.

3 (2). Elytra uniformly squamose, inflexed margins without erect spine-like bristles.

4 (5). Forehead shallowly depressed below the vertex; carinae on rostrum strongly convergent behind; scutellum densely squamose; elytra metallic green above with the inflex margins buff 1. *bicolor* Mshl. ♀.

5 (4). Forehead level with the vertex; carinae on rostrum almost parallel behind; scutellum bare; elytra with uniform scaling throughout
2. *samoensis* Mshl. ♀.

6 (1). Mentum covering the maxillae, without a gular peduncle; mesosternal process acuminate or narrowly truncate behind and there much narrower than the base of a median femur; metasternum between the coxae as long as or nearly as long as a median coxa.

7(70). Inner apical angle of hind tibiae with only a small spine (mucro) which is not longer than the tarsal claws.

8(59). Elytra not angulate or lobate laterally behind the middle.

9(42). Apical processes of elytra with their ventral surface arising well above the true apex.

10(25). Elytra with the apical processes reduced to low tubercles which do not project beyond the true apex, or only slightly so.

11(18). Funicle with the two basal joints equal.

12(17). Scales on rostrum broad, ovate; setae on sides of prothorax entirely recumbent; setae on disk of elytra broad, only as long as two scales, scales in punctures round or ovate.

13(14). Prothorax distinctly transverse, with much-flattened granules and with intervening punctures that are entirely hidden by scaling; eyes not more convex than the temples; scales on pronotum strongly fluted, with only three carinae; granules on disk of elytra very small, normally almost hidden by scaling (Fiji) . 8. *matukuanus* sp. n. ♂♀.

14(13). Prothorax only slightly transverse, with convex shiny granules and without any concealed punctures; eyes slightly more convex; scales on pronotum very finely fluted, with five or six carinae; granules on disk of elytra conspicuous and shiny.

15(16). Elytra with the post-humeral angle projecting laterally, the striae with distinct granules between the punctures on the basal half, the underside of the apical margin with normal recumbent setae; venter with a broad stripe of scaling on each side, which also extends across ventrite 2 (Fiji) . . . . . 6. *griseus* (Guér.) ♂♀.

16(15). Post-humeral angle of elytra not projecting laterally, striae without granules, lower edge of apical margin with a dense patch of fine erect setae; ventrites 1 and 2 with only a small lateral patch of scales, 3 and 4 entirely bare (Fiji) . . . . . 7. *subangulatus* (Fairm.) ♂♀.

17(12). Scales on rostrum narrow; setae on sides of prothorax suberect; setae on disk of elytra slender, as long as three scales, the scales in the punctures setiform (Fiji) . . . . . 5. *obtusatus* (Fairm.) ♀.

18(11). Funicle with segment 2 distinctly longer than 1.

19(20). Mentum with four setae; prothorax with the lateral setae erect; elytra with the intercalated striae (5 and 6) remote from the base, very short and usually confused, interval 3 and the scutellar area slightly raised, the posterior declivity rather steep; rostrum broadly impressed in the middle, without a carina (New Hebrides)
4. *santicolus* sp. n. ♂♀.

20(19). Mentum without setae; lateral setae on prothorax quite recumbent;

elytra much flatter behind, the intercalated striae approaching the base, elongate and regular behind, interval 3 and the scutellar area not raised.

21(22). Elytra with green or coppery scaling and a well-defined pale lateral stripe; sides of prothorax and elytra forming an almost continuous curve; rostrum with a distinct median carina that is higher than the lateral margins; prothorax simply granulate . 9. *cinctus* Boisd. ♂♀.

22(21). Elytra with grey or brown scaling; sides of prothorax and elytra forming a distinct re-entrant angle; rostrum impressed down the middle, at most with a very low median carina; prothorax with punctures between the granules.

23(24). Elytra with the dorsal margins obtusely angled but not costate, nor denticulate, the discal punctures containing very narrow small scales, the setae fine and subrecumbent, the apical tubercles much reduced and with short erect setae (Fiji) . . . . . 3. *cervinus* sp. n. ♂.

24(23). Elytra with the dorsal margins strongly carinate throughout and denticulate, the discal punctures containing large round scales, the setae broad and recumbent, the apical tubercles large and with long erect setae (New Hebrides) . . . . . 10. *rusticus* Pasc. ♀.

25(10). Elytra with the posterior processes projecting strongly beyond the true apex.

26(29). Elytra with a definite bare black sutural stripe of varying width.

27(28). Prothorax with dense cream-coloured scales and scattered bare black granules and with a broad bare median stripe; elytra with the bare sutural stripe extending to stria 2 (New Hebrides) 11. *risbeci* Mshl. ♂♀.

28(27). Prothorax black, almost devoid of scales; elytra with the bare sutural stripe extending to stria 4 (Fiji) . . . . . 12. *painei* sp. n. ♂♀.

29(26). Elytra without a broad bare sutural stripe.

30(33). Prothorax more or less punctate between the granules.

31(32). Rostrum shallowly impressed in the middle, the scrobes squamose; elytra with dense larger scales, which are not smaller than those in the punctures, intervals with very small granules; apical processes with a loose tuft of long setae at the end (New Hebrides) 10. *rusticus* Pasc. ♂.

32(31). Rostrum not impressed, with a much flattened broad median costa, the scrobes bare; elytra appearing black, with separated minute scales, which are smaller than those in the punctures, intervals with conspicuous granules; apical processes with erect setae which do not form a tuft (New Hebrides) . . . . . 13. *ambrymensis* sp. n. ♂♀.

33(30). Prothorax simply granulate, without punctures.

34(41). Scape with recumbent setae; sides of rostrum rugosely and confluently punctate and with a more or less distinct irregular sublateral carina.

35(38). Scales on upper surfaces of normal size and more or less dense, especially on head and sides of prothorax, pale arenaceous; corbels of hind tibiae with the spine-like fringing setae brown.

36(37). Elytra with interval 2 wider than 1 on the basal half, granules on intervals minute and inconspicuous, sparse along the dorsal margins, inner edges of apical processes divergent (New Hebrides) 15. *divaricatus* Waterh. ♂♀.

37(36). Elytra with interval 2 not wider than 1, granules on intervals more conspicuous, dense along dorsal margins, inner edges of apical processes parallel (New Hebrides) . . . 16. *maculicollis* Hllr. ♂♀.

38(35). Scales separated, minute and inconspicuous, so that the general colour appears black; setae fringing hind corbels black.

39(40). Elytra broadly pyriform, the apical processes comparatively slender, pointed and closely contiguous except at the tip; joint 2 of funicle only slightly longer than 1; scrobes sparsely squamose (Fiji) 17. *evansi* sp. n. ♂♀.

40(39). Elytra subelliptical, the apical processes very thick, obtuse and divergent from their base; joint 2 of funicle much longer than 1; scrobes bare (New Hebrides) . . . . . 13. *ambrymensis* sp. n. ♂♀.

41(34). Scape with erect setae; sides of rostrum quite smooth, with large remote punctures, without any trace of a sublateral carina (Solomons) 14. *anensis* sp. n. ♂♀.

42 (9). Apical processes with their ventral surface arising from the actual apex of the elytra.

43(44). Elytra with only five dorsal striae, and with a broad sutural stripe of blue and green scales, the rest of the disk black with minute separated grey scales, and intervals 7 and 8 with a stripe of dense matted whitish scales more or less stained with fulvous (Fiji) 18. *bryani* sp. n. ♂♀.

44(43). Elytra with more than five dorsal striae and without such markings.

45(46). Prothorax with the granules almost obliterated and set with shallow punctures on the disk; elytra with only six dorsal striae (Fiji) 19. *forcipatus* sp. n. ♂♀.

46(45). Prothorax with strong dense granules, without punctures; elytra with more than six dorsal striae.

47(48). Elytra with minute narrow pointed scales (apart from those in the punctures), ♀ with a short high granulate costa at the base of interval 7 (New Hebrides) . . 20. *marginatus* Saund. & Jek. ♂♀.

48(47). Elytra with larger round or ovate scales, ♀ without a basal costa or with only a very indistinct one.

49(54). Rostrum with a conspicuous complete median carina.

50(51). Elytra with a broad stripe of green scales covering interval 3 and half the two adjoining intervals; joint 2 of funicle not or but slightly longer than 1 (Fiji) . . . . . 21. *subvittatus* Pasc. ♂♀.

51(50). Elytra without such a stripe; joint 2 of funicle distinctly longer than 1.

52(53). Elytra elliptical, gradually narrowing behind, the interval that forms the dorso-lateral margin at the basal angle continuing thus to the apex; scales evenly distributed on the intervals and in the striae but much smaller near the suture than at the dorsal margins (Fiji) 22. *prasinus* sp. n. ♂♀.

53(52). Elytra broadly pyriform, rapidly narrowing behind, the interval that forms the basal angle passing obliquely beneath the dorso-lateral margin on a level with the hind coxae; scales of about equal size throughout, normally denser in the discal striae than on the intervals, thus causing an appearance of faint narrow stripes (Fiji) 23. *moalensis* sp. n. ♂♀.

54(49). Rostrum without any distinct carina.

55(58). Interval 9 forming the dorso-lateral margin of the elytra throughout the apical half; scaling green or coppery.

56(57). Elytra with the dorso-lateral margins rounded, not costate or denticulate, the depressed granules mostly transverse and often confluent; apical processes of ♂ stout and obtuse, much shorter than the last ventrite; prothorax of ♂ as long as broad (St. Cruz Is.) 24. *lapeyrousei* Bdv. ♂♀.

57(56). Elytra with the dorso-lateral margins strongly costate and denticulate, the granules round or elongate, never transversely confluent; apical processes of ♂ long, rather slender and pointed, as long as the last ventrite; prothorax of ♂ transverse (Fiji) 25. *smaragdus* sp. n. ♂♀.

58(55). Interval 9 forming the dorso-lateral margin of the elytra from the base to beyond the middle, there replaced by interval 7; scaling grey or brown; striae very indistinct, the elytra appearing irregularly granulate; rostrum without a carina (Fiji) 27. *acuticauda* Fairm. ♀.

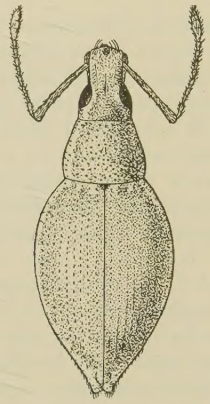
59 (8). Elytra sharply angulate or broadly lobate laterally behind the middle.
60(69). Rostrum without any trace of a median carina.
61(62). Disk of elytra with the striae very indistinct and the punctures obsolescent, appearing irregularly granulate throughout; prothorax widest behind the middle (Fiji) . . . . 27. *acuticauda* Fairm. ♂.
62(61). Disk of elytra with rows of punctures, which are sometimes separated by small granules, the intervals not or indistinctly granulate; prothorax widest at or before the middle.
63(66). Males; apical processes of elytra much longer than the last ventrite, which is subtruncate and finely striolate at the apex and without basal striae.
64(65). Lateral processes on elytra forming a broad rounded up-turned lamina; prothorax as long as broad (New Hebrides) 28. *alatus* Saund. & Jek. ♂.
65(64). Lateral processes on elytra forming a small acute angle directed backwards and not up-turned; prothorax somewhat transverse (New Hebrides) . . . . . 26. *caudatus* Pasc. ♂.
66(63). Females; apical processes of elytra (seen from below) much shorter than the last ventrite, which is roundly acuminate and not striolate at the apex and bears a short longitudinal stria in each basal angle.
67(68). Elytra strongly convex transversely, the apical processes (seen from below) very short (0·5 mm. from true apex of elytra), obtusely rounded (New Hebrides) . . . . . 28. *alatus* Saund. & Jek. ♀.
68(67). Elytra only slightly convex transversely, the apical processes longer (1 mm.), separately acuminate (New Hebrides) 26. *caudatus* Pasc. ♀.
69(60). Rostrum with a strong smooth median carina (Fiji) 29. *expansus* Waterh. ♂♀.
70 (7). Inner apical angle of hind tibiae with a long sharp perpendicular spine, much longer than the tarsal claws.
71(82). Elytra with the granules in the striae not smaller than those on the intervals, at least on the basal half; head and rostrum not longitudinally rugose; femora black, without a dorsal patch of pale scales.
72(75). Elytra strongly convex longitudinally in both sexes, striped, the intervals with dense light brown or cream-coloured scales, the striae bare and appearing as black lines; intervals on elytra each with a single row of small distant granules, the dorsal margins not denticulate.
73(74). Pronotum with the median area granulate and with only a narrow bare median line; elytra with all the dorsal intervals normally densely squamose (Fiji) . . . . . 30. *simmondsi* sp. n. ♂♀.
74(73). Pronotum with a broad bare median stripe, which is set with punctures and not granules; elytra with interval 1 almost entirely bare and the other intervals (except 3) with irregular bare shiny patches (Fiji) . . . . . 31. *subtritus* sp. n. ♂♀.
75(72). Elytra flat longitudinally in ♂ and only slightly convex in ♀; intervals with numerous irregular granules.
76(81). Elytra with the dorsal margins sharply carinate and denticulate; prothorax with normal closely-set granules, which are sometimes contiguous or even fused.
77(80). Elytra with the striae obliterated, the round grey or pale fawn scales more or less dense and of normal size, the apical processes of ♂ (seen from below) shorter than the last ventrite.
78(79). Elytra with uniform dense grey scaling; scape and tarsi merely setose; rostrum almost parallel-sided in basal half and more abruptly widened at the genae; terminal process of male aedeagus elongate, parallel-sided, abruptly turned upwards and broadly rounded or subtruncate at the apex (Fiji) . . . . . 33. *granatus* Fairm. ♂♀.

79(78). Elytra with the pale fawn or grey scaling sparse on the disk, with a dense narrow stripe on interval 3 and a broad one along the dorsal margin; rostrum gradually widening from base to apex, sides almost straight; terminal process of aedeagus much shorter, rapidly acuminate and not turned up at the apex (Fiji) 32. *leveri* sp. n. ♂♀.

80(77). Elytra with the striae shallow but distinct, the scales on the dorsum minute or absent, except for a dense white patch in the basal angles, the apical processes of ♂ longer than the last ventrite (Fiji) 34. *durvillei* Blanch. ♂♀.

81(76). Elytra with the dorsal margins rounded off and not denticulate; prothorax with unusually small isolated granules separated by more than their own diameters (Fiji) . . . . . 35. *protensus* sp. n. ♂.

82(71). Elytra with the granules in the striae smaller than those on the intervals; head and rostrum longitudinally rugose; femora red-brown, hind pair with a small dorsal patch of pale scales (Fiji) 36. *greenwoodi* sp. n. ♂♀.



1

Fig. 1.—*Elytrurus cervinus* sp. n.

1. *Elytrurus bicolor* Mshl.

E. bicolor Marshall, 1921, *Proc. Hawai. ent. Soc.* **4** : 588, 1931, *Ins. Samoa*, **4** (Coleopt.) : 260, f. 3.

Samoa : Upolu, Savaii and Tutuila.

2. *Elytrurus samoensis* Mshl.

E. samoensis Marshall, 1921, *Proc. Hawai. ent. Soc.* **4** : 587.

Samoa.

3. **Elytrurus cervinus** sp. n. (fig. 1).

♂. Piceous brown, with fairly dense greyish-brown scaling; head with a cream-coloured stripe above each eye, which is continued as a broad lateral stripe on the prothorax and then along the deflexed margin of the elytra; underside with a very dense patch of cream-coloured scales adjoining the outer side of the median coxae, and the sides of the metasternum and venter with a more diffuse stripe of similar scales, the median area of the venter with sparse hair-like scales.

Head very shallowly punctate, the forehead flat transversely; eyes flattened, only slightly exceeding the curvature of the head. *Rostrum* with very shallow confluent punctation, shallowly impressed in the middle and without any median carina. *Antennae*

with the scape comparatively slender, gradually clavate, exceeding the front margin of the prothorax, and with narrow scales and recumbent setae; funicle with joint 2 distinctly longer than 1, 3 longer than 4, 4–7 subequal and much longer than broad. *Prothorax* parallel-sided in the basal third, then narrowing to the apex, arcuate at the base, almost flat longitudinally, and set with large punctures interspersed with very depressed granules. *Elytra* elongate, ovate, widest at one-third from the base, gradually acuminate behind, moderately convex longitudinally, with the dorsal margins not denticulate and not even costate in the apical fourth; the apical processes reduced to mere calli bearing erect setae; the shallow striae with well-marked punctures, each containing a narrow scale; the intervals with rows of small flattened granules, each bearing a short fine recumbent seta. *Legs* with indistinct flattened granules and sparse pale scaling; hind tibiae with the inner apical spine inconspicuous; joint 2 of hind tarsi a little longer than broad. *Venter* of ♂ with the last ventrite rugosely punctate throughout.

Length 11·0 mm., breadth 4·7 mm.

Fiji Is.: Ovalau I., 1 ♂, xii.1870.

Type in the British Museum.

4. **Elytrurus santicolus** sp. n.

♂♀. Black, with dense mingled brown and grey scaling, the brown predominating usually in ♀ and the grey in ♂; prothorax with a pale brown or grey curved lateral stripe having its inner edge convex, usually indistinct in ♀; underside with dense brown scaling, even on the venter.

Head impunctate, densely squamose, the forehead slightly flattened, with a small median fovea; the curvature of the eyes only slightly greater than that of the temples. *Rostrum* obsoletely punctate, with dense scaling and fine suberect setae, broadly impressed down the middle; mentum with two distinct setae on each side. *Antennae* with the scape gradually widening from base to apex, slightly exceeding the margin of the prothorax, with dense brown scaling and suberect pale setae; funicle with joint 1 distinctly longer than 2, 3 longer than 4, 4–7 subequal, longer than broad, pyriform. *Prothorax* moderately rounded laterally, widest at the middle, subtruncate at the base, less narrowed in front than usual, shallowly compressed at the sides; the dorsum somewhat flattened in the middle with a very shallow rounded impression on each side behind the middle, sparsely set with minute flat granules; the setae closely recumbent on the disk, more or less erect laterally. *Elytra* broadly ovate, rather narrower and less convex transversely in ♂, strongly convex longitudinally in both sexes and steeply declivous behind, the dorsal margin carinate from base to apex, the apical processes reduced to mere calli not projecting beyond the true apex; interval 7 (which might also be interpreted as 5) with a strong abbreviated costa at the base in both sexes; the first three striae quite regular, but the adjoining ones often much confused by an irregular impression just behind the short basal costa, especially in ♂, in which the two intercalated striae (nominally 4 and 5) are extremely short and united in front and behind; the shallow punctures in the striae containing a brassy scale and without intervening granules; the intervals also without granules (except obsolescent ones on interval 1) and bearing somewhat irregular stout sharply-pointed subrecumbent setae. *Legs* with dense brown scaling and very flat small granules, each bearing a rather long suberect pale seta; tibiae with the apical mucro stout but shorter than the tarsal claws; joint 2 of the hind tarsi transverse.

Length 8–10 mm., breadth 4–5 mm.

New Hebrides: Santo I., Hog Harbour, 5 ♂♂, 6 ♀♀, i.1923, 2 ♂♂, 3 ♀♀, i.–iv.1927 (*J. R. Baker*), 2 ♂♂, 4 ♀♀, vii.1925 (*Dr. P. A. Buxton*); Santo I., 1 ♂, 1 ♀, viii.–ix.1929 (*Miss L. E. Cheesman*).

Type in the British Museum; cotypes in the Oxford University Museum.

5. *Elytrurus obtusatus* (Fairm.) (fig. 2).

Elytrogonus obtusatus Fairmaire, 1881, *Ann. Soc. ent. France*, (6) **1** : 293.

Fiji Is. : Loloti, Viti Levu, 1 ♀, iv.1922 (*W. Greenwood*).

Of this species I have seen only one female in addition to the cotype female which is in the British Museum.

6. *Elytrurus griseus* (Guér.).

Elytrogonus griseus Guérin, 1841, *Rev. Zool.* **1841** : 126; Blanchard, 1853, *Voy. Pôle Sud*, **4** : 237, pl. xv, figs. 1–2; Fairmaire, 1881, *Ann. Soc. ent. France*, (6) **1** : 293.

Most of the following records for this common species are derived from a long series of specimens from many different Fijian islands collected by Mr. E. H. Bryan, Jr., and kindly submitted, with much other interesting material, by Mr. E. C. Zimmerman, of the Bishop Museum, Honolulu.

2

Fig. 2.—*Elytrurus obtusatus* (Fairm.).

Fiji Is. : Viti Levu ; Vanua Levu; Taveuni; Ovalau; Wakaya; Moala; Totova; Matuku; Thikombia; Lau Group : Avea, Kambara, Kanathea, Katafanga, Komo, Lakemba, Mango, Mothe, Naiau, Namuka, Onesta, Thithia, Tuvutha, Vanuambalavu, Vanuavatu.

From the island of Taveuni we have a long series of specimens, collected by Dr. H. Silvester Evans in 1924 (11 ♂♂, 8 ♀♀), which differ from the typical form.

6a. **Elytrurus griseus taveuni** subsp. n.

Differs from *E. griseus* in having the rostrum somewhat flatter and with the median carina confined to the apical half instead of being continued right up to the frontal fovea; on the elytra the basal costa on interval 7 is much more prominent in both sexes, interval 3 is slightly more raised, and all the granules are higher, giving the insect a rougher appearance.

However, none of these characters is absolutely constant, though some combination of them is always present. Further, the aedeagus of the male, though of the same type as that of typical *griseus*, is smaller and much more slender in proportion; which suggests that a process of reproductive segregation may be going on that will eventually lead to specific differentiation.

7. *Elytrurus subangulatus* (Fairm.).

Elytrogonus subangulatus Fairmaire, 1883, *Ann. Soc. ent. Belg.* **27** : 34.

This is a very close ally of *E. griseus* (Guér.) and might easily be overlooked; but in addition to the distinctions given in the key the aedeagus of the male is much broader at its aperture, and the terminal spatula is shorter and narrows more rapidly to the apex.

Fairmaire described this species from Duke of York's Island (also known as Neu Lauenburg) in the Bismarck Archipelago, and there are two cotypes in the British Museum bearing this label. But the locality must almost certainly be incorrect, since the species occurs not uncommonly in the south-east corner of Viti Levu, as the following records show :—

Fiji Is. : Viti Levu : Rewa, 2 ♂♂, 2 ♀♀, iii.1906 (*F. Muir*), 1 ♂, 1 ♀, 1920 (*C. E. Pemberton*); Suva, 1 ♂, 1910 (*F. P. Jepson*), 2 ♂♂, 1920 (*C. E. Pemberton*), 1 ♂, 2 ♀♀, i.1926 (*J. S. Armstrong*); Nausori, 1 ♂, 1 ♀, v.1921 (*R. Veitch*).

8. **Elytrurus matukuanus** sp. n.

♂♀. Black, with dense variegated grey and brown scaling; underside squamose throughout.

Head almost impunctate beneath the dense scaling, the forehead flat transversely; eyes flattened, not more convex than the temples. *Rostrum* with fine close punctures and a few large shallow ones, all concealed by dense scaling, which also almost hides the low median carina. *Antennae* with the scape stout, gradually clavate, densely squamose, and only slightly exceeding the front margin of the prothorax; funicle with joints 1 and 2 equal, 4–7 subequal, moniliform, as long as broad or slightly longer. *Prothorax* distinctly transverse (8 : 11), almost parallel-sided in the basal half, then narrowing to the apex, feebly arcuate at the base, slightly convex longitudinally, highest at the base, set with much flattened small granules without visible punctures, but if the dense scaling be removed, scattered large shallow punctures can be seen; the scales bearing three strong carinae, the short stout pointed setae recumbent and with a coppery reflection. *Elytra* ovate, with a post-humeral angulation as in *griseus* Guér. but not so prominent laterally, with the sides straight from there to beyond the middle and there parallel in ♀ but converging behind in ♂, which is narrower and slightly flatter transversely but equally convex longitudinally; the dorsal margin very strongly costate and denticulate throughout, being slightly turned upwards; the posterior processes simply tubercular and not projecting beyond the true apex, similar in the two sexes; the shallow striae with rather large and widely separated punctures, normally almost concealed by the dense scaling and each containing a pale coppery scale, and without intervening granules; interval 7 strongly costate at the base in the ♀, much less so in the ♂; the remaining intervals with somewhat irregular rows of small and much flattened granules, usually almost hidden by scaling and bearing a sharply pointed coppery seta. *Legs* with dense coppery grey scaling and small flat granules; the mucro of the tibiae short and stout; joint 2 of the hind tarsi transverse.

Length 9·0–9·5 mm., breadth 4·5–5·0 mm.

Fiji Is. : Matuku I., Lau Group, 2 ♂♂, 3 ♀♀, vii.1924 (*E. H. Bryan, Jr.*).

Type and paratypes in the Bishop Museum, Honolulu; cotypes in the British Museum.

Another very close ally of *E. griseus*, but readily distinguishable by the characters given in the key, though in the males the aedeagus is extremely similar.

9. *Elytrurus cinctus* Boisd.

E. cinctus Boisduval, 1835, *in* d'Urville, *Voy.* "*Astrolabe*" (*Ent.*) **2** : 401; Fairmaire, 1849, *Rev. Zool.* **1849** : 511, 1880, *Stettin. ent. Ztg* **41** : 211.

Tonga Is. : Tongatabu; Neiafu, Vavau, ii.–iii.1925 (*P. A. Buxton, G. H. Hopkins*).

10. *Elytrurus rusticus* Pasc.

E. rusticus Pascoe, 1881, *Cist. ent.* **2** : 589; Fairmaire, 1881, *Ann. Soc. ent. France* (6) **1** : 292.
E. serrulatus Waterhouse, 1877, *Trans. ent. Soc. Lond.* **1897** : 10 (**syn. n.**).

An examination of the types and a series of specimens makes it clear that *E. serrulatus* was based merely on small examples of *E. rusticus*, which varies greatly in size.

New Hebrides : Tanna, iv.1925 (*P. A. Buxton*), ix.–x.1930 (*Miss L. E. Cheesman*); Vati; Aneiteum (record perhaps doubtful).

3

Fig. 3.—*Elytrurus risbeci* Mshl.

4

5

Figs. 4–5.—*Elytrurus painei* sp. n.

11. *Elytrurus risbeci* Mshl. (fig. 3).

E. risbeci Marshall, 1937, *Rev. franç. Ent.* **4** : 39; Risbec, 1937, Obs. paras. Plantes cult. Nouvelles-Hébrides, *Faune Colon. franç.* **6** : 157, pl. i, fig. 13.

Since this species was described additional material has been examined, including several males, which are somewhat narrower and slightly flatter than the females, with the apical processes very similar.

Length 9·5–12·5 mm., breadth 3·8–5·5 mm.

New Hebrides : Meli, Efate, xii.1922 (*J. R. Baker*); Vila, Efate, vii.1925 (*Dr. P. A. Buxton*).

12. **Elytrurus painei** sp. n. (figs. 4, 5).

♂♀. Black, the head, rostrum and pronotum with sparse grey or greenish scales; elytra bare from the suture to stria 4 or 5 (except for a single scale in each puncture in the striae), and from there to the dorsal margin with dense round grey scales having a strong lilac reflection, the inflexed margins with similar scaling varying from dense to sparse.

Head with shallow punctures that are usually longitudinally confluent, the forehead

almost flat transversely; the curvature of the eyes continuous with that of the head in ♀, slightly more convex in ♂. *Rostrum* confluently punctate, with a well-marked median carina, which is narrow in ♂ and broad and smooth in ♀, and on each side, more or less parallel with it, a very irregularly broken carina. *Antennae* with the scape moderately slender and very gradually clavate, exceeding the front margin of the pronotum, with hair-like scales and recumbent setae; the funicle with joint 2 distinctly longer than 1, 3 slightly longer than 4, 4–7 subequal, all longer than broad and clavate. *Prothorax* widest at or near the base and narrowing with a gradual curve to the apex, slightly arcuate and subcarinate at the base, distinctly convex longitudinally, and closely set with rather large depressed shiny granules. *Elytra* narrowly subelliptical, broader in ♀, widest at one-fifth (♂) or two-fifths (♀) from the base, quite flat longitudinally in ♂ and gently convex in ♀, moderately convex transversely in ♀, less so in ♂, with the dorsal margins denticulate; the apical processes sharply conical and widely divergent, so that the apex of the suture is clearly visible between them, those of ♂ being somewhat longer; the striae distinct on the bare discal area, without granules but with well-marked punctures, each containing a scale, the discal intervals with the granules obsolete except near the apex; the squamose dorsal margins with the striae concealed, but some small granules showing through the scaling, and the intervals distinctly granulate throughout; the inflexed margins with deeply punctate striae and granulate intervals. *Legs* coarsely granulate, with sparse bluish scales and broad recumbent setae; the apical mucro on the hind tibiae inconspicuous; joint 2 of the hind tarsi strongly transverse in ♂, less so in ♀. *Venter* of ♂ with the last ventrite finely strigose longitudinally on the apical half.

Length ♂ 11·5, ♀ 12–14 mm., breadth ♂ 4·5, ♀ 5·4–6·0 mm.

Fiji Is.: Mbengga I., 1 ♀, ii.1926, 1 ♂, 1 ♀, iv.1927 (*R. W. Paine*).

Type in the British Museum.

A very distinct species on account of its colouring and widely divergent apical processes.

13. **Elytrurus ambrymensis** sp. n.

♂♀. Rather shiny black, with fairly evenly distributed minute narrow separated scales, which are mostly grey, with a few pale green ones.

Head with sparse minute punctures and scattered large ones, but all the punctures may become longitudinally confluent, the forehead with an oval median fovea, the eyes only slightly more convex than the temples. *Rostrum* with a broad flattened impunctate median carina, the lateral areas with mingled large and small punctures which are more or less confluent and with an indefinite oblique sublateral carina; scaling very sparse; scrobes quite bare. *Antennae* with the scape rather long and slender, with setiform grey scales and recumbent setae; funicle with joint 2 much longer than 1, 3–7 subequal. *Prothorax* somewhat transverse, gently rounded laterally, widest at about the middle, subtruncate at the base; the dorsum somewhat flattened in the middle or even with a shallow median sulcus, either with much flattened confluent granules with shallow punctures between them, or with small low separated granules without punctures except along the apical margin; the pleurae with flattened granules above and punctures below; the scaling very fine and sparse, but some rather larger denser scales on the basal half of the dorso-lateral margin. *Elytra* subelliptical and almost flat dorsally in ♂, broader and more convex in ♀, the dorsal margins costate from base to apex, strongly denticulate in ♀, scarcely so in ♂, with a slight elevation at the base of interval 7 in ♂ only; the apical processes of ♂ as long as the last ventrite, stout, obtusely conical and divergent, those of ♀ of the same length, thicker, more obtuse at the apex and almost parallel, clothed with long erect setae in both sexes; the striae very shallow, with obsolescent punctures covered by a scale and separated by granules as large as those on the intervals, which are for the most part arranged

in a single row; scales minute and separated, so that the general colour appears leaden black, the setae minute and inconspicuous on the disk. *Legs* with rather sparse grey and green scaling and large shiny granules; tibiae with the apical mucro short, hidden by a tuft of fulvous setae; joint 2 of hind tarsi as long as broad.

Length 14–16 mm., breadth 5·5–6·5 mm.

New Hebrides: Ambrym I., 1 ♂, 1 ♀, i.1927 (*R. H. Beck*).
Type ♂ in the Bishop Museum, Honolulu; cotype ♀ in the British Museum.

14. **Elytrurus anensis** sp. n.

♂♀. Rather dull black, with sparse minute grey scales, and a few larger greenish scales on the rostrum, along the inner eye margins, in the basal angles of the prothorax, and around the apical processes of the elytra.

Head smooth, with sparse minute punctures and a few larger ones, the forehead with a deep round fovea; the eyes slightly more convex than the temples. *Rostrum* strongly dilated from base to apex, smooth and shiny laterally, with remote punctures and an impunctate median line. *Antennae* with the scape slender, clavate, with very narrow greenish scales and stiff erect setae; funicle with joint 2 half as long again as 1, 3 slightly longer than 4, 4–7 subequal, elongate, clavate. *Prothorax* only slightly broader than long (4 : 3·5), almost parallel-sided in the basal third, then narrowing with a curve to the apex, arcuate at the base; the dorsum strongly convex transversely, with rather sparse small round granules, which are larger and flattened on the pleurae; the setae flattened and minute on the disk, longer and suberect on the pleurae. *Elytra* narrowly ovate in ♂, broader in ♀, moderately convex longitudinally (more so in ♀) and rather strongly convex transversely (more so in ♂), the dorsal margin costate and denticulate from base to apex in ♀, less markedly so in ♂, without any trace of a basal costa on interval 7; the apical processes similar in the two sexes, rather short, obtuse and divergent; the striae very shallow, with distinct granules and small shallow punctures just behind them containing a pale scale, the punctures becoming almost obliterated near the apex; the intervals with regular rows of somewhat flattened granules which are larger and less numerous than those in the striae and bear a small subrecumbent spatulate or scale-like seta. Legs with sparse greenish scales and shiny granules; tibiae with the apical mucro very short, hidden by a tuft of fulvous setae; joint 2 of hind tarsi about as long as broad.

Length 15 mm., breadth 6·0–6·7 mm.

Solomon Is.: Santa Ana I., 1 ♂, 1 ♀, 12.iii.1927 (*F. P. Drowne*).
Type ♂ in the Bishop Museum, Honolulu; cotype ♀ in the British Museum.

15. *Elytrurus divaricatus* Waterh.

E. divaricatus Waterhouse, 1877, *Trans. ent. Soc. Lond.*, **1877** : 10.

New Hebrides: Vati; Ambrym, vi.1925 (*P. A. Buxton*).

16. *Elytrurus maculicollis* Hllr.

E. maculicollis Heller, 1916, *Nov. Caledon.* (*Zool.*) **2** : 358.

New Hebrides: Ringdove Bay, Epi I., vii.1900 (*J. J. Walker*); Epi, vi.1925 (*P. A. Buxton*).

17. **Elytrurus evansi** sp. n. (fig. 6).

♂♀. Dull black, with sparse minute grey or greenish scales between the granules, the scaling often denser along the edges of the dorsum and on the deflexed lateral margins;

the sides of the metasternum rather densely squamose, and a few scales at the sides of the basal ventrite.

Head with very shallow obsolescent punctures, sometimes more distinct and longitudinally confluent, the forehead gently convex transversely, the eyes moderately prominent. *Rostrum* rugosely and confluently punctate, tricarinate, the median carina broad and smooth, the lateral ones narrower, less regular and strongly converging behind. *Antennae* with the scape comparatively slender, slightly exceeding the front margin of the pronotum, with hair-like scales and recumbent setae; funicle with joint 2 slightly longer than 1, 3 slightly longer than 4, 4–7 subequal and all longer than broad. *Prothorax* widest at the base, narrowing with a gradual curve to the apex, gently arcuate at the base, closely set throughout with low granules, and usually with a feeble depression in the middle of the base. *Elytra* pyriform, rapidly tapering at the apex, quite similar in outline in the two sexes, flattened in ♂ and only slightly more convex in ♀, with the dorsal margins

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Fig. 6.—*Elytrurus evansi* sp. n.

denticulate; the apical processes with their ventral surface arising well above the true apex of the elytra, elongate, contiguous except at the extreme apex, and similar in the two sexes; the striae almost obliterated, with inconspicuous punctures covered by a small scale and separated by granules that are as large as and more numerous than those on the intervals, which latter are arranged in a single row. *Legs* rather coarsely granulate and with sparse minute scales; the hind tibiae with the apical mucro inconspicuous; joint 2 of the hind tarsi transverse.

Length 9·6–12·6 mm., breadth 4·5–6·0 mm.

Fiji Is.: Taveuni, 10 ♂♂, 6 ♀♀, xi.–xii.1923, ii.–iii.1924 (*Dr. H. Silvester Evans*).

Type in the British Museum.

Very similar superficially to the female of *E. acuticauda* Fairm., which, however, has the rostrum longer, more dilated at the apex, without any median carina, but with a very shallow broad median depression, the elytra are much less strongly rounded, widest rather behind the middle, with the granules on the intervals irregularly duplicated, and the posterior processes with their apices divergent.

18. **Elytrurus bryani** sp. n. (fig. 7).

♂♀. Rather dull black; head and rostrum with rather sparse grey scales; prothorax with dense grey scales mostly or entirely suffused with fulvous; elytra with minute separated greenish-grey scales, giving them a leaden black colour, with a broad common sutural stripe of dense blue and green scales extending to the middle of interval 2, the green scales being smaller and occurring along the suture, intervals 7 and 8 (below the dorso-lateral margin) with a stripe of dense matted whitish scales more or less tinged with fulvous or cinnamon.

Head with large close punctures, which are usually longitudinally confluent, especially on the forehead, the frontal fovea small, the eyes not more convex than the temples. *Rostrum* with a broad impressed median area set with longitudinally confluent punctures,

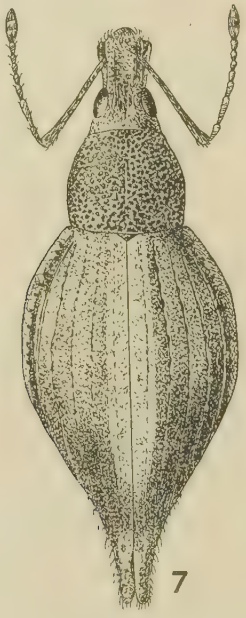

Fig. 7.—*Elytrurus bryani* sp. n.

the higher lateral areas rugosely punctate, parallel, without any oblique sublateral carina; the scrobes rather densely squamose. *Antennae* with the scape long and slender, clothed with greenish hair-like scales and recumbent setae; joint 2 of funicle 1·5 to 1·8 times as long as 1, 3 longer than 4, 4–7 subequal. *Prothorax* as long as broad in both sexes, moderately rounded laterally, widest at about the middle, subtruncate at the base; the dorsum unusually convex longitudinally, and also transversely, sloping somewhat steeply in front, with numerous small shiny separated granules; the pleurae with sparser and flatter granules; the scales dense between the granules. *Elytra* pyriform, rapidly narrowed behind, almost flat longitudinally and transversely in ♂, only slightly more convex in both directions in ♀ and not any broader, the dorso-lateral margins rounded off and not denticulate, without any trace of basal elevations; the apical processes of ♂ long and slender, longer than the last ventrite, closely contiguous except at the tip, which bears rather numerous short erect setae, processes of ♀ similar but shorter; the discal striae very distinct and only five in number (the intercalated ones being absent), without granules but with

very shallow punctures, which do not contain a larger scale, except in the case of stria 1, which is almost concealed by the large round blue scales of the sutural stripe, but its punctures contain a large oval scale (often white); the intervals broad, with numerous irregular small flattened granules, with minute shallow punctures between; the scales on intervals 7 and 8 very long and densely overlapping, with a row of low shiny granules along each margin of the stripe. *Legs* with fairly dense pale scaling and small low granules; tibiae with the apical mucro short and stout; joint 2 of hind tarsi somewhat transverse.

Length 12–17 mm., breadth 5·5–7·5 mm.

Fiji Is.: Naiau, Lau Group, 12 ♂♂, 10 ♀♀, 12.ix.1924 (*E. H. Bryan, Jr.*). *Type* and cotypes in the Bishop Museum, Honolulu; cotypes in the British Museum.

When in good condition this is the most strikingly coloured species in the genus.

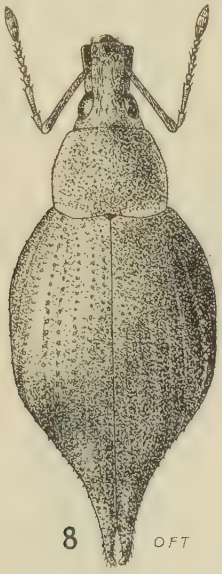

Fig. 8.—*Elytrurus forcipatus* sp. n.

19. **Elytrurus forcipatus** sp. n. (fig. 8).

♂♀. Dull black, with small close (but hardly contiguous) round grey scales, which are fairly evenly distributed throughout the upper surface, producing a general leaden black colour.

Head with rather large, longitudinally confluent punctures, the frontal fovea small and inconspicuous, the eyes slightly more convex than the temples. *Rostrum* flat or very shallowly impressed in the middle, with large longitudinally confluent punctures throughout, without any definite carinae; scrobes sparsely squamose. *Antennae* with the elongate scape thinly clothed with hair-like scales and recumbent setae; funicle with the 2nd joint 1·5 to 1·7 times as long as the first, 3 longer than 4, 4–7 subequal, pyriform. *Prothorax* moderately transverse, slightly narrowing or parallel-sided from the base to the middle, then narrowing in a curve to the apex, the base broadly sinuate in the middle and rounded laterally; the dorsum slightly convex longitudinally, sloping anteriorly, with small obsolescent granules and very shallow punctures, the setae very short and recumbent; the

pleurae with the sculpture smoother and normally almost hidden by the larger denser scales. *Scutellum* larger than usual, elevated, triangular, bare and shiny. *Elytra* broadly pyriform, rapidly narrowing posteriorly, gently convex longitudinally and almost flat transversely in ♂, rather more convex in both directions in ♀, the base rather deeply sinuate on each side, the dorsal margins obtusely costate only in the median third and rounded off in front and behind, very feebly denticulate in the apical half only; six shallow discal striae, with small punctures filled by a round grey or greenish scale that is usually slightly larger than the adjacent ones, separated by small flattened granules (sometimes obsolescent); the intervals with remote irregular minute obsolescent granules that are smaller than those in the striae, the setae minute and pale on the disk; the apical processes of ♂ elongate, slender and sharply pointed, longer than the last ventrite, with the apices turned upwards and inwards like a pair of forceps, those of ♀ somewhat shorter, less slender, simple and narrowly divergent, the setae in both sexes long and erect but not forming a tuft. *Legs* with numerous shiny granules and rather sparse scaling, the mucro on the tibiae short, the hind tarsi with joint 2 somewhat transverse in ♂, as long as broad in ♀.

Length 11–16 mm., breadth 4·7–7·5 mm.

Fiji Is.: Tuvutha I., Lau Group, 5 ♂♂, 4 ♀♀, 10–11.ix.1924 (*E.H.Bryan,Jr.*).

Type and cotype in the Bishop Museum, Honolulu; cotypes in the British Museum.

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Fig. 9.—*Elytrurus subvittatus* Pasc.

20. *Elytrurus marginatus* Saund. & Jek.

E. marginatus Saunders & Jekel, 1855, *Ann. Soc. ent. France* (3) **3** : 291, pl. xv, fig. 2.

New Hebrides: Eromanga, vii.–viii.1930, Aneiteum, xi.1930 (*Miss L. E. Cheesman*).

21. *Elytrurus subvittatus* Pasc. (fig. 9).

E. subvittatus Pascoe, 1881, *Cist. ent.* **2** : 589; Fairmaire, 1881, *Ann. Soc. ent. Fr.* (6) **1** : 291.
E. horizontalis Fairmaire, 1881, *loc. cit.* (syn. n.)

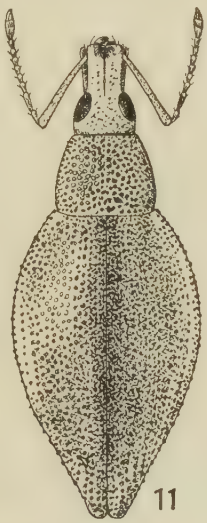
Fairmaire's *E. horizontalis* is merely the male of Pascoe's species.

Fiji Is.: Levuka, Ovalau, 1855; Ngau, vii.1927 (*R. W. Paine*).

22. **Elytrurus prasinus** sp. n. (figs. 10, 11).

♂♀. Black, with uniform green scaling between the granules.

Head with shallow, longitudinally confluent punctures (hidden by scaling) and much flattened sparse granules; the forehead transversely convex; the curvature of the eyes continuous with that of the head. *Rostrum* sculptured like the head, with a strong shiny median carina and an irregular dorsal costa on each side of it, the latter converging towards the base. *Antennae* with the scape exceeding the front margin of the prothorax, slender, gradually clavate, with rather dense narrow scaling; the funicle with joint 2 one-third longer than 1, 3 longer than 4, 4–6 subequal, clavate and longer than broad, 7 as long as 3. *Prothorax* more or less parallel-sided in the basal half (more so in ♂), then gradually



FIGS. 10–11.—*Elytrurus prasinus* sp. n.

narrowing in front, gently arcuate at the base, almost flat longitudinally, and closely set throughout with low shiny granules. *Elytra* ovate and widest at one-third from the base in ♀, narrower and more lanceolate and widest at one-fourth in ♂, gradually acuminate behind, almost flat longitudinally in ♂, more convex in ♀, with the dorsal margins denticulate; the apical processes 1·5 mm. long beneath in ♂, 1·0 mm. in ♀, rather obtuse, contiguous (except at the actual tips), and with only very short or inconspicuous setae; the striae indistinct, the punctures containing larger round scales and separated by shiny flattened granules, which are as large as those on the intervals, the latter granules bearing small inconspicuous scale-like setae. *Legs* with low shiny granules and fairly dense green scales between them; the apical spine on the hind tibiae short; joint 2 of the hind tarsi transverse. *Venter* of ♂ with the terminal ventrite finely striolate on the apical half.

Length 13·5 mm., breadth ♂ 5·2, ♀ 6·6 mm.

FIJI IS.: Kandavu I., 1 ♂, 1 ♀, viii.1874 (*Challenger Expedition*).
Type in the British Museum.

23. **Elytrurus moalensis** sp. n.

♂♀. Black, with rather sparse small round greenish or coppery scales which are fairly evenly distributed, but on the disk of the elytra the scales are usually more numerous in the striae than on the intervals, thus producing an appearance of indefinite narrow stripes.

Head longitudinally strigose, with an elongate frontal fovea, the eyes slightly more convex than the temples. *Rostrum* with very coarse longitudinally confluent punctation, leaving a broad smooth complete median carina and a more or less distinct and somewhat oblique sublateral carina on each side of it; scrobes sparsely squamose. *Antennae* with the scape rather short, gradually clavate, with narrow scales and recumbent setae; joint 2 of the funicle only slightly longer than 1. *Prothorax* somewhat transverse in ♂, rather more so in ♀, almost parallel-sided in the basal third, then roundly narrowing to the apex, subtruncate at the base; the dorsum with a small flattened area in the middle of the base and sloping forwards at the apex, closely set with small low granules with scaling in between; the pleurae with sparser flatter granules. *Elytra* broadly pyriform, rapidly narrowing behind, of almost the same shape in the two sexes, slightly convex in both directions in ♂, a little more so in ♀, the dorsal margins costate throughout (rather obtusely so in the basal half), denticulate only in the apical half, the interval which forms the basal angle passing obliquely beneath the dorso-lateral margin on a level with the hind coxae, the apical processes of ♂ narrowly conical, almost as long as the last ventrite and contiguous in their basal half (very rarely shorter and more divergent), those of ♀ similar but somewhat shorter, the setae very short and recumbent; the faint striae containing shallow punctures separated by obsolescent granules and not containing a distinctive scale; the intervals bearing irregular (often duplicated) much flattened granules, the setae minute and inconspicuous. *Legs* with the tibial mucro short but sharp; joint 2 of the hind tarsi strongly transverse.

Length 11·5–12·5 mm., breadth 5·0–5·8 mm.

Fiji Is.: Moala I., 7 ♂♂, 6 ♀♀, 7–10.vii.1924 (*E. H. Bryan, Jr.*).

Type and cotypes in the Bishop Museum, Honolulu; cotypes in the British Museum.

24. *Elytrurus lapeyrousei* Boisd.

E. lapeyrousei Boisduval, 1835, *in* d'Urville, *Voy.* "*Astrolabe*" (*Ent.*) **2**: 400; Boheman, 1843, *in* Schönherr, *Gen. Curc.* **7**: 239.
E. vanikorae Heller, 1935, *Arb. morph. tax. Ent.* **2**: 269 (**syn. n.**).

Dr. K. M. Heller has been good enough to send me a cotype of his *E. vanikorae*, and this I sent, with other specimens, to Mr. d'Orchymont, who very kindly compared them critically with Boisduval's type, which is in the Royal Museum at Brussels, and has expressed himself as satisfied that the insects are conspecific.

Santa Cruz Is.: Vanikoro, v.1933 (*R. A. Lever*).

25. **Elytrurus smaragdus** sp. n. (fig. 12).

♂♀. Dull black, with uniform metallic scales between the granules.

Head with sparse scaling and longitudinally confluent punctures, the forehead almost flat transversely; eyes flat, not more convex than the temples. *Rostrum* very shallowly and sparsely punctate, with a low costa on each side close to the lateral margin, the median area flat and without any trace of a carina. *Antennae* with the scape exceeding the front margin of the prothorax, gradually clavate and with rather sparse setiform scales; joint 2 of the funicle 1·7 times as long as 1, 3 longer than 4, 4–7 subequal and longer than broad. *Prothorax* gently rounded at the sides, widest behind the middle, arcuate at the base with a shallow sinuation in the middle, distinctly convex longitudinally and declivous in front, closely set with low granules. *Elytra* rather narrowly ovate (only slightly wider in ♀), widest at one-fourth from the base, strongly acuminate behind, with the dorsal margins denticulate; the apical processes of the ♂ 1·5 mm. long (seen from below), as long as the

last ventrite, contiguous in the basal half, separated but parallel apically, with short sparse setae; the processes of the ♀ half as long and slightly divergent; the obsolescent striae with shallow indistinct punctures, which do not contain a scale and are separated by flattened granules of the same size as those on the intervals; the scales rounded and all approximately equal, the intervals with rows of inconspicuous scale-like setae. *Legs* with flattened granules, many of those on the hind femora being elongate, and with numerous green scales; the mucro on the hind tibiae short; joint 2 of the hind tarsi as long as broad in ♀, slightly transverse in ♂. *Venter* of ♂ with the last ventrite striolate only on the apical fourth.

Length ♂ 11·0, ♀ 12·0 mm., breadth ♂ 4·5, ♀ 5·0 mm.

Fiji Is.: Kandavu I., 1 ♂, 1 ♀, vii.1927 (*R. W. Paine*).

Type in the British Museum.

Rather similar to *E. prasinus* sp. n., from which it differs in its much more acuminate elytra, the larger and more metallic scales, the absence of a conspicuously larger scale in the punctures, and in the much less transverse second hind tarsal joint.

Fig. 12.—*Elytrurus smaragdus* sp. n.

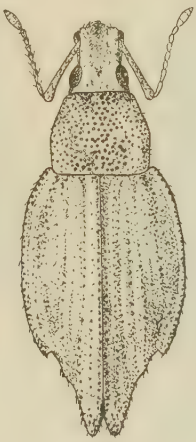


Fig. 13.—*Elytrurus caudatus* Pasc.

26. *Elytrurus caudatus* Pasc. (fig. 13).

E. caudatus Pascoe, 1870, *J. linn. Soc.* (*Zool.*) **10** : 471, pl. xviii, fig. 5.
E. dentipennis Fairmaire, 1879, *Le Naturaliste*, **1** : 46; 1880, *Stettin. ent. Ztg* **41** : 209 (**syn. n.**).

New Hebrides: Tanna I., ix.–x.1930 (*Miss L. E. Cheesman*).

Pascoe erroneously recorded this species from Fiji; Miss Cheesman obtained a long series of it in the New Hebrides.

It is difficult to understand Fairmaire's treatment of this species, which he describes (1880, *Stettin. ent. Ztg*, **41** : 209) as having the elytral margin neither dentate nor angulate; whereas the marked angulation of the margin is clearly shown in Pascoe's excellent figure of the male. It has not been possible to ascertain what was the actual species to which Fairmaire attributed the name *E. caudatus*, but the point has no significance, beyond the fact that he redescribed Pascoe's species under the name *E. dentipennis*.

27. *Elytrurus acuticauda* Fairm. (fig. 14).

E. acuticauda Fairmaire, 1879, *Le Naturaliste*, **1** : 46; 1880, *Stettin. ent. Ztg* **41** : 208.

Fiji Is.: Taveuni I., xii.1921 (*H. W. Simmonds*), xi.1923, v. and x.1924 (*Dr. H. Silvester Evans*).

28. *Elytrurus alatus* Saund. & Jek.

E. alatus Saunders & Jekel, 1855, *Ann. Soc. ent. France* (3) **3** : 290, pl. xv, fig. 1.

New Hebrides: Futuna I.

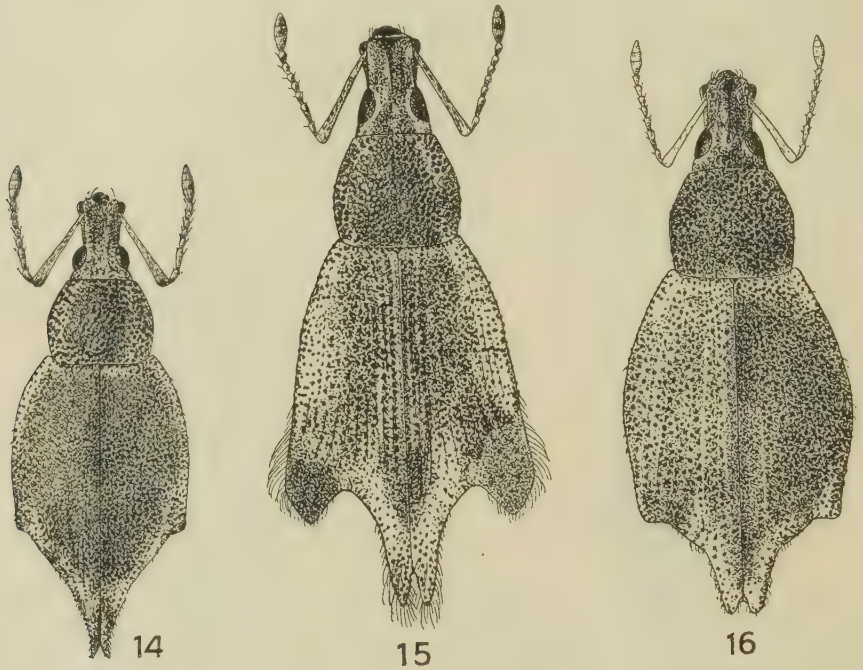


Fig. 14.—*Elytrurus acuticauda* Fairm. Figs. 15–16.—*Elytrurus expansus* Waterh.

29. *Elytrurus expansus* Waterh. (figs. 15, 16).

E. expansus Waterhouse, 1877, *Trans. ent. Soc. Lond.* **1877** : 8.

Fiji Is.: Viti Levu: Navua, xi.1906 (*F. Muir*); Natova, x.1914 (*R. Veitch*); Mt. Evans, Lautoka, ii. and v.1919, i.1920 (*W. Greenwood*).

In the Brussels Museum there is an interesting gynandromorph of this species; the specimen is a male with elytra similar to those of a female, except for the presence of long setae on the apical processes.

30. **Elytrurus simmondsi** sp. n. (fig. 17).

♂♀. Black or piceous brown, with dense pale brown or grey scaling; the prothorax with only the sparse granules and a narrow abbreviated median line bare; the elytra with the striae rather broadly bare of scaling, giving the insect a striped appearance; the sternum densely squamose, except on the outer margin of the mesosternal side-pieces, the venter with lateral patches of scales on ventrites 1, 2, 5.

Head with very shallow sparse punctures that are hidden by the scaling; the forehead strongly convex transversely, with a bare shiny median stripe that contains the frontal fovea; the eyes a little more convex than the head. *Rostrum* sculptured like the head, evenly convex transversely, without carinae, but with a bare median stripe continuous with that on the forehead. *Antennae* with the scape stout, gradually clavate, and only just reaching the front margin of the prothorax, with dense oblong scales and stout suberect setae; the funicle stout, the two basal joints equal, the remainder subequal, moniliform, as long as broad or slightly transverse. *Prothorax* rounded at the sides, widest a little beyond the middle, almost flat longitudinally, with a very shallow median depression close to the base, sparsely set with very flat granules which are more numerous along the middle, and usually with a very narrow abbreviated bare median line. *Elytra* broadly ovate in ♀, a little narrower in ♂, only shortly acuminate behind, strongly convex longitudinally in both sexes, the dorsal margins less sharply costate than usual and not denticulate; the apical

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Fig. 17.—*Elytrurus simmondsi* sp. n.

processes similar in the two sexes, only shortly projecting beyond the apex of the elytra (seen from below), and set with short subrecumbent setae; the striae shallow but distinct, appearing very conspicuous owing to their being entirely bare and shiny, except for an inconspicuous scale in the punctures, which are separated by granules larger than those on the intervals; striae 4 and 5 much abbreviated, reaching neither base nor apex and usually uniting both in front and behind; the intervals densely squamose, each with a single row of very small and widely separated granules, which bear a short recumbent seta. *Legs* densely squamose, with sparse minute flattened granules; the hind tibiae with the mucro very long and stout, but with the denticulation along the inner edge much smaller than usual and sometimes obsolete; joint 2 of the hind tarsi transverse. *Venter* of ♂ strongly punctate, but without striolae or granules at the apex.

Length 9–11 mm., breadth 4·0–5·5 mm.

Fiji Is.: Viti Levu: Vunidawa, 1 ♂, 1 ♀, 1920 (*C. E. Pemberton*); Lami, 1 ♀, 1920 (*Pemberton*); Nausori, 1 ♀, v.1921 (*R. Veitch*); Tamavua, 2 ♂♂, 1 ♀, ii., vi.1922 (*H. W. Simmonds*—type); Suva, 1 ♀, xii.1925 (*G. H. E. Hopkins*); Colo-i-Suva, 2 ♂♂, 2 ♀♀, vi.1924 (*E. H. Bryan*).

Type in the British Museum; cotypes in the Bishop Museum, Honolulu.

A very distinctive species, somewhat resembling *E. griseus* (Guér.) in shape, but differing markedly in its striped elytra, stout moniliform funicles, and in the long mucro on the tibiae.

31. **Elytrurus subtritus** sp. n. (fig. 18).

♂♀. Very closely allied to *E. simmondsi* sp. n., from which it differs as follows :—

Pronotum with a broad bare median stripe, which is set with irregular punctures and bears no granules. Elytra of ♂ broader, like those of ♀; interval 1 almost bare throughout, the remaining intervals (except 3, and sometimes 5) with irregular shiny bare patches; these bare areas are not abraded, being glossy, whereas abraded areas show minute pitting for the attachment of the scales; the squamose stripes on the intervals rather broader, and the bare striae narrower, than in *simmondsi*.

The apical process of the male aedeagus is somewhat shorter, more pointed, and less sinuate laterally in its basal half.

Length 10·0–10·5 mm., breadth 4·5–5·2 mm.

Fiji Is. : Ovalau I., 1 ♂, 2 ♀♀, xi.1927(*H. W. Simmonds*).
Type in the British Museum.

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Fig. 18.—*Elytrurus subtritus* sp. n.

32. **Elytrurus leveri** sp. n.

♂♀. Derm black, with pale fawn or grey scaling which is dense at the sides of the pronotum and sparser in the middle; elytra with the scaling rather sparse in the middle of the disk except for a dense narrow stripe throughout interval 3 and a broad stripe along the dorso-lateral margins; underside with irregular patches of scales at the sides of the sternum and the mesosternal process densely squamose, the venter shiny black with some scaling in the lateral angles of the basal ventrite.

Head with sparse shallow punctures, the forehead gently convex transversely with a deep median fovea, the eyes moderately convex. *Rostrum* widening from base to apex, with the genae rather less dilated than usual, the shallow subconfluent punctures mostly hidden by scaling, with a broad smooth median stripe, the sublateral carinae very indistinct and converging basally. *Antennae* with the scape scarcely exceeding the front margin of the prothorax, very gradually clavate; funicle with segment 2 slightly longer than 1, 3 a little longer than 4, 4–7 subequal and as long as broad. *Prothorax* very nearly as long as broad in ♂, a little broader in ♀, moderately rounded laterally, widest at the middle, arcuate at the base, flat longitudinally, set with large shiny granules that are mostly separated by less than their own diameters; the scales round. *Elytra* pyriform and only slightly convex longitudinally in ♂, much broader and somewhat more convex in ♀, with

the dorsal margins sharply costate and denticulate; the apical processes of ♂ shorter than the last ventrite, stout, obtusely conical, divergent, set with shiny granules and subrecumbent setae, the processes of ♀ somewhat shorter; the striae practically obliterated, the shallow punctures separated (at least in the basal half) by granules that are as large as those on the intervals, which are numerous and irregular. *Legs* with dense uniform scaling and shiny granules; the mucro on the hind tibiae long and stout; joint 2 of the hind tarsi transverse. *Venter* of ♂ with the last ventrite granulate at the apex.

Length ♂ 11·0, ♀ 10·5–12·0 mm.; breadth ♂ 4·5, ♀ 5·0–5·6 mm.

Fiji Is.: Vanua Levu, 1 ♂, 3 ♀♀, x.1937 (*R. A. Lever*).
Type in the British Museum.

33. *Elytrurus granatus* Fairm.

E. granatus Fairmaire, 1879, *Le Naturaliste*, **1**: 116; 1880, *Stettin. ent. Ztg*, **41**: 210.

Fiji Is.: Rewa, Viti Levu, 1906 (*F. Muir*); Nausori, Viti Levu, x.1920, v.1921 (*R. Veitch*); Taveuni I., xii.1921 (*H. W. Simmonds*).

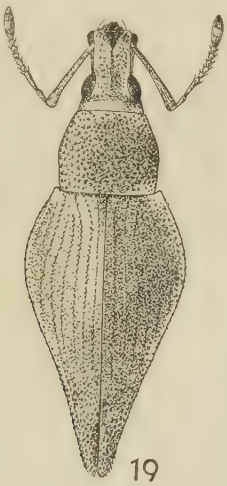


Fig. 19.—*Elytrurus protensus* sp. n.

34. *Elytrurus durvillei* Blanch.

E. durvillei Blanchard, 1853, *Voy. Pôle Sud.*, **4**: 221, pl. xiii, fig. 9; Fairmaire, 1880, *Stettin. ent. Ztg*, **41**: 210.

Fiji Is.: Vanua Levu: Savu Savu, ii.1922, Wainunu, xi.1924 (*H. W. Simmonds*).

35. **Elytrurus protensus** sp. n. (fig. 19).

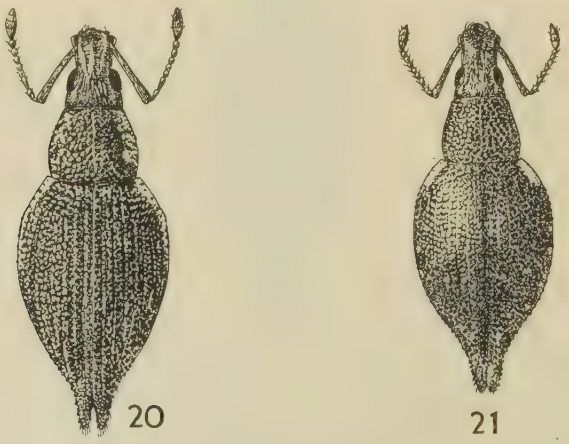
♂. Dull black, with fairly dense minute scales, those on the head and rostrum pale brown and denser, those on the pronotum also pale brown but much sparser, but larger and denser along the base at the posterior angles and on the pleurae near the coxae; the elytra with minute grey scales dorsally, those on the deflexed margin much larger and paler, forming an ill-defined whitish spot in the basal angles; the sternum with fairly dense larger pale scales, the venter bare.

Head with sparse shallow punctures, the forehead almost flat transversely, the eyes

moderately convex. *Rostrum* shallowly punctate, with a low median carina, the sublateral carinae rather indefinite and converging basally. *Antennae* with the scape exceeding the front margin of the prothorax, moderately stout and very gradually clavate; joint 2 of the funicle 1·2 times as long as 1, 4–7 subequal and a little longer than broad. *Prothorax* gently rounded at the sides, widest at the middle, arcuate at the base, flat longitudinally from the base to four-fifths, then sloping to the apex, set throughout with small isolated convex shiny granules that are separated by more than their own diameters; the scales minute and narrow. *Elytra* elongate pyriform, rapidly tapering behind, widest at one-fourth from the base, almost flat longitudinally, with the dorsal margins more rounded off than usual and not denticulate; the apical processes of ♂ 1·8 mm. long (seen from beneath), contiguous throughout, set with shiny granules and short recumbent setae; the striae shallow but distinct, 6 extending only from the base to one-fourth, 7 very irregular in the basal half; the punctures each containing a larger scale and separated by granules equal to those on the intervals, which are small and sparse and bear very small inconspicuous setae. *Legs* with rounded granules and fairly dense narrow scales; the mucro on the hind tibiae long and stout; joint 2 of the hind tarsi transverse. *Venter* of ♂ with the last ventrite granulate at the apex.

Length 14 mm., breadth 5·5 mm.

Fiji Is.: Viti Levu, Colo-i-Suva, 1 ♂, viii.1925 (*C. T. McNamara*). *Type* in the British Museum.



Figs. 20–21.—*Elytrurus greenwoodi* sp. n.

36. **Elytrurus greenwoodi** sp. n. (figs. 20, 21).

♂♀. Black or piceous, with very sparse minute narrow scales (usually abraded) and a few small patches of much larger oval opalescent cream-coloured scales; head with a stripe of oval scales (often abraded) above the eyes; prothorax with a lateral stripe of similar scales (usually abraded); elytra with a conspicuous dense patch of oval scales in the basal angles, which is sometimes produced along the dorsal margin for one-third of the length, and a few small spots along the dorsal margin posteriorly and in the striae on the disk; underside with several small patches of oval scales at the sides of the sternum, but none on the venter.

Head longitudinally rugose; the forehead slightly convex transversely; the eyes a little more convex than the head. *Rostrum* also longitudinally rugose, tricarinate, with

the outer carinae converging strongly towards the base. *Antennae* with the scape distinctly exceeding the front margin of the prothorax in ♂ but not in ♀, clothed with fine hair-like scaling; the funicle stout, joint 2 slightly longer than 1, 3 longer than 4, 4–7 subequal and a little longer than broad. *Prothorax* rounded at the sides, widest rather behind the middle, almost flat longitudinally, with a very shallow median impression near the base, closely set with low granules, and with a more or less regular narrow median line free from granules. *Elytra* narrowly pyriform in ♂, broader in ♀, flat to beyond the middle and then sloping to the apex in ♂, more convex in ♀, with the dorsal margins denticulate; the apical processes of ♂ 1·3 mm. long (seen from below), those of ♀ 0·8 mm., usually contiguous but sometimes narrowly separated, set with granules and short setae; the striae shallow but distinct, regular; the punctures containing a narrow ovate scale (often absent) and separated by granules smaller than those on the intervals, which are numerous, much flattened and irregular; the setae on the intervals minute. *Legs* with the femora red-brown, the tibiae and tarsi darker; femora with the granules unusually small and sparse except on the apical area, the hind pair with a conspicuous dorsal patch of broad pale scales, the legs being otherwise devoid of scaling; the mucro on the hind tibiae long and stout; joint 2 of the hind tarsi transverse. *Venter* of ♂ with the terminal ventrite finely granulate on the apical third.

Length 10·0–13·5 mm., breadth 4·4–5·7 mm.

Fiji Is.: Viti Levu: Mt. Evans, Lautoka, 1 ♂, ii.1919 (type), 1 ♀, iv.1920 (*W. Greenwood*); Loloti, 1 ♀, ix.1921 (*Greenwood*); 1 ♀, 1906 (*C. Knowles*); 1 ♂, 1 ♀ (*R. Veitch*).

Type in the British Museum.

Superficially much like *E. durvillei* Blanch., which represents it on Vanua Levu, but in addition to the differences given in the key, the latter species has the scape in the ♂ not exceeding the front margin of the prothorax, and the tibiae are normally rather densely squamose dorsally.

Hellerrhinus gen. n.

Head separated from the rostrum by an angulated furrow. *Rostrum* sloping gradually (and not abruptly) in the apical half, broadly dilated at the genae; the scrobes (viewed from above) broad and curving strongly inwards posteriorly; mentum supported on a short peduncle, covering the maxillae, and with a transverse row of 4 or 5 setae. *Antennae* with the scape comparatively slender, reaching almost to the middle of the prothorax, subcylindrical, more or less strongly compressed laterally close to the apex, which is abruptly clavate, squamose and with erect setae; funicle with the two basal joints equal, 3 a little shorter, 4–7 equal and elongate; club fusiform, elongate. *Elytra* with ten complete striae. *Legs* elongate, slender; femora clavate, simple; tibiae with the dorsal edge straight, not markedly compressed, feebly denticulate, with a small mucro, the hind pair with the corbels semi-enclosed, the inner edge of the bevel without setae; tarsi elongate, with long fine setae, joint 2 of the hind pair slightly longer than 3. *Sternum* with the front coxae narrowly separated; mesosternal process subquadrate, broadly truncate; metasternum between the coxae as long as a middle coxa, metepisternal suture obsolete behind. *Venter* with the intercoxal process broadly truncate, much broader than a coxa, and ventrite 2 much longer than 3 and 4.

Genotype: *Hellerrhinus furculus* sp. n.

As indicated above, this genus is proposed for the reception of six new species from New Guinea together with *Elytrurus* (?) *papuanus* Heller. The new species were all collected by Miss L. E. Cheesman in one locality, namely,

on Mt. Tafa, at an altitude of 8500 feet, in February 1934; Mt. Tafa lies to the north-west of Mt. Albert Edward.

This genus is sufficiently distinguished from *Elytrurus* by the presence of a sulcus separating the head from the rostrum, by the very different structure of the corbels of the hind tibiae (as explained in the introduction to this paper), and by the separation of the front coxae.

In Faust's Key to the Celeuthetini (1897, *Stettin. ent. Ztg* **58** : 230) the genus would run down to *Apirocalus* Pasc., which, however, differs in the following characters: the rostrum is parallel-sided; the scrobes (viewed from above) are narrower and almost parallel; the scape of the antennae is broad, strongly compressed dorso-ventrally, and not clavate at the apex; the front tibiae have the dorsal edge strongly curved apically, and joint 2 of the hind tarsi is much shorter than 3; and the metasternum is shorter than a middle coxa.

It must be noted that these characters for *Apirocalus* apply solely to *A. cornutus* Pasc., the only species which really belongs to it; for *Apirocalus gestroi* Pasc. (Yule I.) and *A. thomsoni* Waterh. (St. Aignan, Louisiade Arch.) must both be transferred to *Heteroglymma* Fst. To the latter genus also belong *Trigonops jekeli* Pasc. (Celebes), *T. dispar* Saund. & Jek. (New Hebrides), and *T. bicristatus* Montr. (Woodlark I.).

Key to the Species of Hellerrhinus.

1(10). Elytra with two long spines projecting backwards from the top of the declivity, not angulate laterally behind the middle.

2 (3). Elytra each with a longitudinal bare stripe (3 mm.) in the middle of the disk which does not quite reach the base; apical part of rostrum with sparse narrow recumbent white scales in addition to the erect setae . . . . . *papuanus* (Hllr.).

3 (2). Elytra without any discal bare stripe; apical part of rostrum without scales.

4 (5). The following areas bare of scaling; an interrupted median carina on the prothorax, the sutural margin of the elytra and a large oblong sub-humeral patch; disk of elytra without distinct setae; three terminal ventrites squamose . . . . . *humeralis* sp. n.

5 (4). These areas covered with scaling and waxy secretion; three terminal ventrites bare.

6 (9). Elytra with short erect dark setae, the supra-apical spines almost horizontal; head deeply striolate (sometimes hidden by secretion); the whole disk of the pronotum flattened or shallowly impressed.

7 (8). Elytra with an obtuse lateral angulation a little before the middle; forehead on a level with the rostrum, eyes moderately convex, highest at middle; venter of ♂ strongly bent at the second incision, ventrite 5 with a large apical impression . . . . . *ventralis* sp. n.

8 (7). Elytra not angulate laterally; forehead sloping and forming an angle with the upper surface of the rostrum, eyes strongly convex, highest behind the middle; venter of ♂ almost flat, ventrite 5 not impressed *furculus* sp. n.

9 (6). Elytra with minute recumbent setae, the supra-apical spines pointing upwards at an angle of 45–60°; head not striolate; pronotum with a deep transverse impression behind the middle *sursumcauda* sp. n.

10 (1). Elytra strongly angulate laterally behind the middle, without supra-apical spines; pronotum with a broadly interrupted shiny median costa.

11(12). Elytra with a large obtuse projecting lateral angulation behind the middle and another smaller one close to the apex; posterior declivity sloping gradually and with only minute recumbent setae on its disk; length 10–11 mm. . . . . *cheesmanae* sp. n.

12(11). Elytra behind the middle with a sharply conical lateral projection which is obliquely elevated; posterior declivity steep and with long erect setae; length 7 mm. . . . . *conifer* sp. n.

FIG. 22.—*Hellerrhinus furculus* sp. n.

Hellerrhinus furculus sp. n. (fig. 22).

♂♀. Piceous, with dense green scaling covered with an olive-green incrustation, without bare patches; underside with pale fawn scaling laterally, the median area (except on ventrites 1 and 2) and the whole of ventrites 3–5 bare.

Head sloping steeply forwards, deeply striate; eyes strongly convex, highest behind the middle. *Rostrum* with the bare apical half rugosely longitudinally punctate, the basal half with a low median carina (sometimes hidden by scaling) and with stout recumbent greenish-white setae. *Prothorax* slightly transverse, rounded laterally, widest at a little beyond the middle, subtruncate at the base; the dorsum flattened or shallowly depressed in the middle of the disk, with an irregular group of small shiny granules in front of the depression and another group behind it in ♀, but no granules in ♂, the sculpture otherwise concealed by scaling; the sparse setae short and recumbent; the pleurae with deep punctures showing through the scaling. *Elytra* ovate, rounded laterally, with two long sharp almost horizontal processes arising from the top of the declivity, which are more or less divergent with the apex of the elytra visible between them, those of the ♀ being appreciably shorter than those of the ♂ and rather more divergent; the striae shallowly indicated through the scaling and also traces of the punctures; the disk flattened or shallowly impressed in the basal half as far as interval 5, then sloping outwards to interval 7, without any dorsal depressions towards the apex; the upper surface rather sparsely set with moderately long fine erect setae, those on the processes longer, stouter and curved.

Legs with dense brown scaling having a coppery reflection and with small bare spots; the posterior pairs of tarsi with a few ovate scales on the two basal joints. *Venter* of ♂ almost flat, without an impression on ventrite 5.

Length (without processes) 5·0–6·5 mm., breadth 2·4–3·0 mm.

Type in the British Museum.
Described from 10 ♂♂ and 4 ♀♀.

Hellerrhinus humeralis sp. n.

♂. Derm piceous black, with dense pale green scales above, which are hidden by an olive-green indumentum, with the following bare areas: apex of rostrum and a median line on the basal half, a broadly interrupted shiny median costa on the pronotum, a narrow basal margin on the elytra, the edge of the suture from the base to four-fifths, and a large subhumeral patch; underside with dense pale green scales throughout (without indumentum) irrorated with small bare spots.

Head sloping slightly forwards, deeply striolate; eyes rather strongly convex, highest at the middle. *Rostrum* with the apical half rugosely punctate and most of the punctures longitudinally confluent, the basal half densely squamose except for a low bare median carina. *Prothorax* as long as broad, rounded laterally, widest in front of the middle, with the base gently arcuate; the dorsum densely squamose, with a few irregular small bare spots and a bare shiny median costa which is sparsely punctate and widely interrupted behind the middle by a broad shallow transverse depression. *Elytra* ovate, strongly rounded laterally and bearing at the top of the declivity two long sharp horizontal processes which are widely divergent with their inner edges arising from the suture, the true apex of the elytra being visible between them when viewed vertically; the striae are almost entirely hidden by the dense incrustation, but on the bare humeral patch they appear shallow with large close punctures; the dorsum almost flat as far as interval 5, which is obtusely elevated in the basal third, and there is a shallow depression laterally at the widest part of the elytra and another near the base of each apical process; the setae on the disk are scarcely perceptible, but those at the apex and on the processes are moderately long and curved. *Legs* testaceous brown, with rather sparse round pale green scales which are denser on the apical half of the femora interspersed with numerous bare spots; tibiae not denticulate; tarsi without scales. *Venter* of ♂ quite flat, without any apical impression and the basal one shallow.

Length (excluding processes) 6 mm., breadth 3 mm.

Type in the British Museum.
Described from a single ♂.

Hellerrhinus ventralis sp. n.

♂. Piceous with uniform pale green or sandy scaling covered above with a dense pale olive-green incrustation; underside with dense sandy scaling laterally, sparsely squamose in the middle, and the three terminal ventrites quite bare.

Head striolate, but with the sculpture almost or entirely hidden, the forehead on a level with the rostrum; eyes moderately convex, highest at the middle. *Rostrum* with the basal two-thirds densely squamose, but sometimes showing a trace of a narrow median carina, the bare apical area rugosely punctate. *Prothorax* as long as broad, rounded laterally, widest beyond the middle, arcuate at the base; the dorsum flattened, with a large round shallow depression occupying nearly the whole of the disk; on the periphery of the depression a few minute black granules bearing a very short subrecumbent seta show through the incrustation; the pleurae with dense scaling (without incrustation) interrupted by rather large separated punctures. *Elytra* ovate, strongly rounded at the

sides, with a low obtuse rounded lateral projection at about one-third from the base, and at the top of the declivity two almost horizontal or slightly up-turned, stout sharp conical processes (1 mm. long), which have their outer sides parallel to one another, while the inner sides diverge and arise from stria 1 and not from the suture; the dorsum gently convex longitudinally, highest at the middle, transversely flattened in the basal half, and with the short apical declivity very steep; the punctures in the shallow striae scarcely visible dorsally, but distinct on the deflexed margins, which are squamose but not incrusted; the sparse setae on the dorsum short and erect, arising from minute granules, those on the declivity much longer. *Legs* blackish-brown, with the tibiae paler, with fairly dense grey scaling and bare spots; the hind tarsi usually with a few scales. *Venter* of ♂ of an unusual form, the two basal ventrites being convex with a large median depression and the second incision deeply depressed, so that the three apical ventrites form a strong angle with the basal ones; ventrite 5 convex and with a large median impression on the apical half.

Length 7·5–8·5 mm., breadth 3·5–3·7 mm.

Type in the British Museum.
Described from 5 ♂♂.

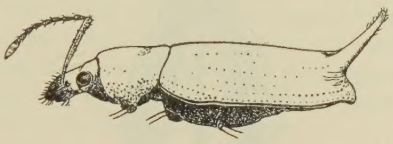


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FIG. 23.—*Hellerrhinus sursumcauda* sp. n.

Hellerrhinus sursumcauda sp. n. (fig. 23).

♂♀. Piceous black, with uniform dense pale green and sandy scaling covered by an olive-green or yellowish incrustation dorsally which is rather uneven on the elytra; underside with the scaling sparse in the middle and denser laterally, the three apical ventrites quite bare.

Head finely and closely punctate, with at most one or two median striae, the forehead on a level with the rostrum; eyes moderately convex, highest at the middle. *Rostrum* with dense scaling and short dark erect setae on the basal half, the apical half much less coarsely punctate than in the other species. *Prothorax* as long as broad, moderately rounded laterally, widest beyond the middle, subtruncate at the base; the dorsum slightly flattened, with a broad deep transverse impression behind the middle and the rest of the sculpture concealed, only scattered minute dark recumbent setae showing through the scaling; the pleurae with separated punctures visible. *Elytra* narrowly ovate in ♂, broader in ♀, widest at one-third from the base, the apical margin produced downwards into a sharp beak-like process in the ♀ only; the dorsal outline almost flat to the top of the short steep declivity, where there arise two long sharp processes, which in the ♂ are 2·5 mm. long, close together and pointing upwards at an angle of about 60°, whereas in the ♀ they are somewhat stouter, shorter (2 mm.), more widely separated, but still parallel, and rising at an angle of about 45°; the shallow punctate striae are entirely concealed by the incrustation, and only a few minute recumbent setae are visible dorsally. *Legs* testaceous, with sparse coppery grey scaling; tarsi black, with a few broad scales on all the pairs. *Venter* of ♂ with two broad transverse impressions on the basal ventrite, the apical ventrite strongly convex without any impression.

Length (without processes) 9–11 mm., breadth 4–5 mm.

Type in the British Museum.
Described from 2 ♂♂ and 1 ♀.

Hellerrhinus cheesmanae sp. n. (fig. 24).

♂♀. Dull black, with markings formed of dense pale green scales covered with pale olive-green or yellowish incrustation; head and rostrum almost bare; prothorax almost bare dorsally with a dense squamose stripe laterally, the upper edge of which is sharply defined and on a level with stria 7 of the elytra, the lower edge merging into the diffuse scaling of the pleurae; elytra with a squamose dorsal stripe between striae 1 and 3 running from the base to the top of the declivity and there rapidly broadening to double the width and narrowing again at the apex, and a lateral stripe from base to apex extending from the margin to stria 7; underside with moderately dense scaling and bare spots throughout.

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Fig. 24.—*Hellerrhinus cheesmanae* sp. n.

Head sloping, deeply striate (or carinulate); eyes strongly convex, highest at the middle. *Rostrum* with coarse longitudinally confluent punctation, and a smooth median stripe on the basal third. *Prothorax* a little longer than broad, moderately rounded at the sides, widest beyond the middle, gently arcuate at the base; the dorsum flattened, finely coriaceous, with sparse minute shiny granules and with a broad smooth shiny median costa, which is sparsely punctate and broadly interrupted behind the middle by a shallow transverse impression. *Elytra* of abnormal shape, widening with a gentle curve from the base to two-thirds, where there is a large obtuse lateral angulation that is slightly elevated, the sides then gradually narrowing almost to the apex, where there is another rounded angulation, this being more prominent and subrectangular in ♂ and more obtuse-angled in ♀; the actual apical area distinctly projecting beyond the subapical angulations in ♀, shorter and more broadly rounded in ♂; all the angulations bare and indefinitely reddish-brown; the median part of the disk almost flat longitudinally in the basal half and rapidly declivous behind, the striae very shallow and indistinctly punctate even on the bare areas; the intervals finely coriaceous, with irregular rows of very small sparse shiny granules, the setae very short and recumbent, becoming longer and more or less erect at the apex. *Legs* piceous, with rather sparse blue-grey scales and scattered minute granules, the hind femora with a band of green or yellowish scaling which is dorsally extended as a short stripe; tarsi without scales. *Venter* of ♂ almost flat, without an impression on ventrite 5.

Length 11 mm., breadth 5·6 mm.

Type in the British Museum.
Described from one pair.

Hellerrhinus conifer sp. n.

♀. Dull black, with sparse round pale green scales (perhaps abraded), somewhat covered with grey incrustation on the declivity of the elytra; underside with sparse green scales throughout.

Head deeply striolate, the forehead on a level with the upper surface of the rostrum; eyes moderately convex, highest in the middle. *Rostrum* longitudinally rugose on the basal half, without any distinct median carina, the apical half very coarsely punctate. *Prothorax* about as long as broad, moderately rounded laterally, widest at about the middle, gently arcuate at the base; the dorsum finely transversely plicate laterally, finely rugulose and subgranulate in the middle, with a broad smooth shiny median costa which is sparsely punctate and broadly interrupted by a transverse impression behind the middle; the pleurae coriaceous, with deep separated punctures. *Elytra* ovate, widest behind the middle and there with a large conical lateral process which points obliquely upwards; the dorsum flattened and shallowly depressed as far as interval 5, outside of which the surface slopes rapidly downwards, the apical declivity rather steep and beginning on a line with the lateral processes; the striae shallow and indistinct, the separated punctures more or less filled by scaling, striae 4–7 being obliterated behind by the conical lateral process; the intervals flat and rugulose, with sparse irregular small granules; the setae minute and recumbent on the disk but longer along the dorsal margins, and still longer and erect on the declivity. *Legs* piceous, rugulose, with very sparse scaling, the tarsi without scales.

Length 7 mm., breadth (across the processes) 4 mm.

Type in the British Museum.
Described from a single female.